



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,076	02/13/2006	Takahisa Kida	117386-00107	7445
27557 7590 05/26/2009 BLANK ROME LLP WATERGATE 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037				
EXAMINER				
CHIN, RANDALL E				
ART UNIT		PAPER NUMBER		
3723				
MAIL DATE		DELIVERY MODE		
05/26/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/568,076

**Applicant(s)**

KIDA ET AL.

**Examiner**

Randall Chin

**Art Unit**

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-08)  
Paper No(s)/Mail Date 02132006-05182007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 13 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 16 March 2009.
2. Applicant's election without traverse of Group I, claims 1-12 and 15-29, in the reply filed on 16 March 2009 is acknowledged.

### *Specification*

3. The disclosure is objected to because of the following informalities:

In the preliminary amendment filed on 13 February 2006, a replacement page 16 of the specification was incorrectly submitted. Applicant is respectfully requested in again submitting the changes to be made on p. 16 by identifying **only the specific paragraphs** where changes are to be made by referring to specific page and line number. See **MPEP 714, II. B.**

On p. 10, line 33, it appears "cylinder 21" should read --cylinder 211--.

On p. 11, line 13, please correct "232and".

On p. 11, line 21, "round reel 32" should read --round reel 33--.

On p. 11, line 24, "second ratchet 32A" should read --second ratchet 34A--.

On p. 11, line 35, "ratchet 34a" should read --ratchet 34A--.

On p. 12, line 12, "cleaning section 23" should read --cleaning section 21--.

On p. 12, line 20, ratchet 32" should read –ratchet 32A--.

On p. 12, line 21, ratchet 32" should read –ratchet 32A--.

On p. 12, line 25, it appears "post 40a" should read –post 14a--.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 2, 15 and 19 are objected to because of the following informalities:

Claim 2, "the respective predetermined directions" (lien 15) and "the respective predetermined angles" (lien 16) both lack proper antecedent basis.

Claim 15, "the side surfaces and end section" (lines 12-13) both lack antecedent basis.

Claim 15, line 14, it is not exactly clear what "the outside" of the cleaning tape is referring to.

Claim 19, line 5, it is unclear what "A" is referring to here. Such term should be deleted.

Claim 19, lines 9-10, the recitation that the cleaning section rotation drive means rotates the **bar-like member** appears inaccurate since it is unclear whether the bar-like member is actually referring to the hollow cylinder 211 (Figs. 5 and 6) and which does not appear to rotate.

Claim 19, line 6, "the cleaning tape" lacks antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12 and 15-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clairadin et al. 6,209,163 (hereinafter Clairadin) in view of Japan 2002-090576 (hereinafter Japan '576).

As for claim 1, the patent to Clairadin discloses in Figs. 1-6, for example, an optical fiber connector cleaner 14 (col. 3, lines 6-9) comprising a housing 16, a cleaning tape winding means defined by take-up reel 38 and cleaning tape delivery means defined by supply reel 36 arranged inside the housing, a cleaning means having a bar-like cleaning section defined by nose 28 projecting outwardly from the housing, on the front-end of the cleaning section the cleaning tape 70 (Fig. 5) delivered from the delivery means 36 being movably mounted under tension in an exposed state, the front-end of the cleaning section being brought into contact with the end surface of an optical fiber connector to thereby clean the end surface, and a transmission means defined by ratcheting handle 60 which rotates the winding means and the cleaning section rotating means substantially simultaneously in a predetermined direction through a predetermined angle and then reverses the cleaning section rotating means to its original position (col. 4, lines 25-38). The patent to Clairadin discloses all of the recited subject matter as set forth above with the exception of a cleaning section rotating

means coaxially connected to the cleaning section in the housing and rotatably supported with respect to the housing. Japan '576 teaches an optical fiber connector cleaner comprising a cleaning section rotating means 32, 35a, 35b (Fig. 7) coaxially connected to a cleaning section 33 in the housing and rotatably supported with respect to the housing 1. It would have been obvious to one of ordinary skill in the art to have substituted the rotating means of Japan '576 for Clairadin's drive means in order to improve the cleaning of optical fibers through the use of rotational movement of the cleaning tape.

Claim 2 is rejected similarly as above for claim 1. It will be added that Japan '576 teaches a cleaning tape guide means coaxially connected to the cleaning section and rotatably supported in relation to the housing (Fig. 7). As stated above, it would have been obvious to one of ordinary skill in the art to have substituted the rotating means of Japan '576 which would include cleaning tape guide means for Clairadin's drive means in order to improve the cleaning of optical fibers through the use of rotational movement of the cleaning tape.

As for claim 3, the transmission means 60 rotates the winding means 38, the delivery means 36 and the cleaning tape rotating means substantially simultaneously.

As for claim 4, the cleaning section includes a hollow bar-like member or nose 28 and a "smooth" (merely a relative term) member which could be backing block 32 (Fig. 3, for example) arranged at the end of the bar-like member 28.

As for claim 5, in Clairadin, the cleaning section includes a hollow bar-like member 28 and a pivot trunnion or roller 32a rotatably mounted at the end of that bar-like member.

As for claim 6, the main part of the cleaning section is a solid bar-like member 28 (Fig. 3).

As for claims 7 and 8 reciting that the cleaning tape is cloth that has been subject to a fuzz prevention process, it should be noted that methods of forming are not germane to patentability in apparatus claims. In any case, only positive structural limitations are attributed patentable significance with respect to characteristics of the recited cleaning tape. As for claim 8, the cleaning tape of Clairadin can be woven cloth (col. 4, lines 35-38).

As for claim 9, in Clairadin, the transmission means includes an arm 60 that rises and lowers in vertical (merely a relative term) direction, and the transmission means is configured such that due to the downward (merely relative term) movement of the arm 60 the winding means 38 is rotated to a first angle in a first direction while simultaneously the cleaning section rotating means is rotated to a second angle in a second direction, moreover due to the upward movement of the arm the cleaning part rotating means is rotated to the second angle in the opposite direction to the second direction (col. 4, lines 8-22; Figs. 2, 3 and 5).

As for claim 10, in Clairadin, the transmission means includes an arm 60 that rises and lowers in vertical (merely relative) direction, and the transmission means is configured such that due to the downward (merely relative) movement of the arm the

winding means is rotated to a first angle in a first direction while the cleaning section rotating means is rotated to a second angle in a second direction and simultaneously therewith, the delivery means 36 is rotated to the first angle in a third direction, moreover due to the upward movement of the arm the cleaning part rotating means is rotated to the second angle in the opposite direction to the second direction (col. 4, lines 8-22; Figs. 2, 3 and 5).

As for claim 11, the arm of the transmission means 60 has a plurality of notches on pawl 64 formed along the longitudinal direction thereof, the cleaning section rotating means has a plurality of protrusions defined by pawl teeth disposed on the external peripheral surface thereof, and when the arm descends the protrusions of the cleaning section rotating means are pushed down in succession by the notches on the arm and the cleaning part rotating means rotates at a determined angle in a determined direction, while when the arm ascends the protrusions of the cleaning section rotating means are pushed up in succession by the notches on the arm and the cleaning section rotating means rotates at a determined angle opposite to that determined direction (col. 3, line 53 to col. 4, line 7).

As for claim 12, the arm of the transmission means 60 includes a pawl or rack having a plurality of notched grooves at 60a, 64, the cleaning part rotating means includes a pinion having a plurality of teeth 62a that engage with the rack, and the cleaning section rotating means rotates in a determined direction or in a direction opposite thereto in response to the ascent or descent of the arm (col. 3, line 53 to col. 4, line 7).



As for claim 15, Clairadin teaches in Figs. 1-6, and similarly above for claims 1 and 2, an optical fiber connector cleaner 14 comprising a housing 16 of a size that can be held in one hand, a bar-like cleaning section defined by nose 28 disposed at the end of the housing and having an axis of extension, a winding means 38 and a delivery means 36 arranged inside the housing a cleaning tape 70 that is wound up by the winding means after being delivered from the delivery means and being wound around the end of the cleaning section, a cleaning section rotating means 50, 62, 64 (Fig. 2) that rotates the cleaning section a determined amount about the axis of extension, and a manual operating part defined by ratcheting handle 60 that drives the cleaning section rotating means simultaneously with driving the winding means, wherein the cleaning section 28 includes a bar-like inner guide member defined by passage 28b (Fig. 5) around the side surfaces and end section of which the cleaning tape 70 is arranged, and an outer side guide member defined by the outer nose structure itself that encompasses the inner guide member and the outside of the cleaning tape 70 with the end of the inner guide member exposed at opening 28c, the inner guide member and the outer guide member are deemed biased by spring 31 to the direction of the end of the housing, independent of each other (col. 3, lines 28-40). The patent to Clairadin discloses all of the recited subject matter as set forth above with the exception of the cleaning section being supported at the base by a shaft disposed in the housing, and which can rotate about the shaft at a determined angle in relation to the housing. Japan '576 teaches an optical fiber connector cleaner comprising a cleaning section rotating means 32, 35a, 35b (Fig. 7) defined by a shaft disposed in the housing, and which can

rotate about the shaft at a determined angle in relation to the housing. It would have been obvious to one of ordinary skill in the art to have substituted the rotating means of Japan '576 for Clairadin's drive means in order to improve the cleaning of optical fibers through the use of rotational movement of the cleaning tape.

As for claim 17, the optical fiber connector cleaner has a cover 18 (Fig. 1) that can be attached to and removed from the cleaning section, the cover includes a tubular part 28 having an insertion hole that can accommodate the insertion of a terminal of the male side of a connector (Fig. 6).

As for claim 18, the cover 18 includes a flange or cap near shaft 33 (Fig. 5) that covers the insertion hole.

As for claim 19, Clairadin teaches in Figs. 1-6, and similarly as above for claims 1, 2 and 15, an optical fiber connector cleaner for cleaning the end surface of a ferrule of an optical fiber connector comprising a housing 16, a cleaning section disposed at one end of the housing, said cleaning section including a nose or bar-like member 28 rotatably supported (through pivot trunnions 32a shown in Fig. 3) in the housing about the axis of extension of the bar-like member, the cleaning tape 70 being supported at the end of the bar-like member in an exposed state so as to be capable of movement in the lengthwise direction of a cleaning tape, a movable operating part defined by ratcheting handle 60 disposed in the housing, a cleaning section rotation drive means 50, 62, 64 that is connected to the bar-like member and the operating part and rotates the bar-like member about the axis of extension in response to movement of the operating part, and a winding means 38 that is connected to the operating part, that

winds the cleaning tape 70 in response to movement of the operating part and that advances the cleaning tape at the end of the bar-like member.

As for claim 20, the cleaning section rotating drive means rotates the bar-like member (or at least a first part thereof at pivot 32 or pivot trunnions 32a in Fig. 3) in the forward direction of the rotation of the axis of extension in response to a first movement of the operating part and rotates the bar-like member in the backward direction returning the bar-like member to their original position in response to a second movement of the operating part, wherein the winding means has a winding part 38 rotatably supported in the housing that winds the cleaning tape 70, this winding part 38 rotating in a predetermined direction to wind the cleaning tape 70 in response to either the first or the second movement of the operating part 60, advancing the cleaning tape at the end of the bar-like member.

As for claim 21, the cleaning section rotating drive means includes a pinion disposed "at the base" (a broad phrase) of the bar-like member 28 and a rack that engages with the pinion, disposed on the operating part 60 (Figs. 2-5; col. 3, line 53 to col. 4, line 22).

As for claim 22, the winding means 38 includes a winding part rotatably supported on a shaft disposed in the housing, that winds the cleaning tape, a first rotation drive plate and a second rotation drive plate rotatably supported on the shaft, arranged along the axis of extension of the shaft on the respective sides of the winding part, a first ratchet mechanism disposed between the winding part and the first rotation drive plate, and a second ratchet mechanism disposed between the winding part and

the second rotation drive plate, wherein the first and second ratchet mechanisms convey to the winding part only a rotation in a first rotational direction turning around that shaft (Figs. 2-5; col. 3, line 53 to col. 4, line 22).

As for claim 23, the winding means 38 includes a movable member that moves in response to movement of the operating part, the movable member including a first rack that engages a first pinion disposed on the first rotation drive plate and a second rack that engages a second pinion disposed on the second rotation drive plate, the first and second racks operating in response to movement of the operating part, to engage the first and second pinions respectively so as to rotate the first and second rotation drive plates in mutually opposite directions (Figs. 2-5; col. 3, line 53 to col. 4, line 22).

As for claim 24, the cleaning section rotation drive means includes a spring 31 (Fig. 5) connecting the pinion and the bar-like member respectively.

As for claim 25, the cleaning section includes a guide sleeve respectively that supports the bar-like member, the guide sleeve being rotatably supported in the housing so as to change the angle of the axis of extension in relation to the longitudinal axis of the housing. As stated above, it would have been obvious to one of ordinary skill in the art to have substituted the rotating means of Japan '576 which would include a cleaning tape guide "sleeve" for Clairadin's drive means in order to improve the cleaning of optical fibers through the use of rotational movement of the cleaning tape.

As for claim 26, in the modified Clairadin device, the cleaning section would include a tubular guide sleeve rotatably supported in the housing, and a tubular external guide member supported so as to be capable of sliding along the axis of extension

along the inner side surface of the guide sleeve and that accommodates the bar-like member and the cleaning tape (Fig. 7 of Japan '576) such that the bar-like member and the cleaning tape are capable of sliding along the axis of extension the bar-like member is connected to the cleaning section rotation drive means via a connecting member thereby enabling it to receive rotational driving force from the cleaning section rotation drive means, and the external guide member has an engaging part capable of engaging with a stepped part formed in the guide sleeve and is biased in the direction toward the end of the bar-like members along the axis of extension by spring disposed between the external guide member and the bar-like member such that the stepped part and the engaging part engage together. Claim 27 is rejected similarly.

As for claim 28, in Clairadin, the housing 16 has a "long slender" form (merely a relative expression).

As for claim 29, in the modified Clairadin device, the cleaning section rotation drive means is mechanically connected to the bar-like member 28 and the operating part 60, and the winding means is mechanically connected to the operating part 60.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Cox, Villemaire, Kiani, Loder, Sato and Fujiwara are relevant to various optical connector cleaner arrangements.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randall Chin whose telephone number is (571) 272-1270. The examiner can normally be reached on Monday through Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randall Chin/  
Primary Examiner, Art Unit 3723